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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/531,166

04/11/2005

Hans-Christoph Magel

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EXAMINER

KIM, CHRISTOPHER S

ART UNIT

PAPER NUMBER

3752

MAIL DATE

DELIVERY MODE

07/11/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,166	Applicant(s) MAGEL, HANS-CHRISTOPH	
	Examiner Christopher S. Kim	Art Unit 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20,21,23-36 and 38 is/are pending in the application.
- 4a) Of the above claim(s) 26,28,29,31-34 and 36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35 and 38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The response filed April 25, 2008 is acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

3. Claims 26, 28, 29, 31-34 and 36 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on December 20, 2006.

Claim Rejections - 35 USC § 102

4. Claim 38 is rejected under 35 U.S.C. 102(b) as being anticipated by Boecking (US 2002/0023970 A1).

Boecking discloses a fuel injection device comprising:

- a multi-part injector body 2;
- an injection valve element 30;
- at least one injection opening 31;
- a nozzle chamber 28;
- a pressure booster means comprising:

- a pressure booster piston 9, 15, 19;
- a working chamber 13;
- a differential pressure chamber (chamber surrounding 10);
- a high-pressure chamber 6;
- a nozzle chamber inlet 11, 11.1;
- a control chamber 7;
- an on-off valve 3;
- a central control line (downstream vertical portion of 10).

5. Claims 35 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Schneider (4,538,576).

Schneider discloses a fuel injection device comprising:

- a multi-part injector body 12 (body 12 includes multiple parts including plunger 16);
- an injection valve element 52;
- at least one injection opening 54;
- a nozzle chamber 64;
- a pressure booster means comprising:
 - a pressure booster piston 18;
 - a working chamber 20;
 - a differential pressure chamber 30;
 - a high-pressure chamber (chamber of valve 96);
- a nozzle chamber inlet 62;

a control chamber 22;
an on-off valve 80;
a central control line 46.

Response to Arguments

6. Applicant's arguments filed April 25, 2008 have been fully considered but they are not persuasive.

Regarding claim 24, applicant is invited to present claim 24 in independent form. If a rejection of claim 24 was unintentionally omitted, claim 24 will be rejected in a non-final Office action. Otherwise, claim 24 will be allowed.

Regarding applicant's argument directed to Boecking, Boecking discloses a high-pressure chamber 6 defined, at least in part, by an end face of the pressure booster piston 9, 15, 19. The high-pressure chamber 6 is connected to the nozzle chamber 28 by the nozzle chamber inlet 11, 11.1. The claimed invention does not prohibit the throttle 10 being part of that connection.

Applicant argues that Schneider fails to teach or suggest a fuel injection device of the type recited in claim 38, including a pressure booster piston, a working chamber on one side of the pressure booster piston, a differential pressure chamber on an opposite side of the pressure booster piston, a high-pressure chamber defined, at least in part, by an end face of the pressure booster piston and a nozzle chamber inlet hydraulically connecting the nozzle chamber with the high-pressure chamber. Schneider discloses a pressure booster means comprising: a pressure booster piston 18; a working chamber

20; a differential pressure chamber 30; a high-pressure chamber (chamber of valve 96); a nozzle chamber inlet 62; a nozzle chamber 64. The high-pressure chamber (chamber of valve 96) is defined, at least in part, by an end face of the pressure booster piston 18 via inlet port 86.

Applicant argues that claim 38 requires that the pressure booster piston be actuated by means of a pressure change in the differential pressure chamber and that the pressure change in the differential pressure chamber must occur via the central control line. Schneider discloses, in column 3, line 65 through column 4, line 15, that movement of piston 18 is controlled by the opening of dump port 42 via passage 46.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571) 272-4905. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher S. Kim/
Primary Examiner, Art Unit 3752

CK